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/Brianna Dahlberg/

Brianna Dahlberg

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Inventor:

Andrew Martin MALLINSON et al.

Application No. 10/810,312

Confirmation No. 7978

Filed: 26 March 2004

Title: **SYSTEM AND METHOD FOR
COMPENSATING FOR ERROR IN A SIGMA
DELTA CIRCUIT**

Group Art Unit: 2819

Examiner: Brian K. YOUNG

Customer No. 49413

COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56

Sir:

It is requested that the information identified in this statement be considered by the Examiner and made of record in the above-identified application. This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 C.F.R. 1.56.

Enclosed with this statement is a Form PTO-SB/08. The Examiner is requested to initial the form and return it to the undersigned in accordance with M.P.E.P. 609.

Also enclosed with this statement is a copy of each cited document as required by 37 C.F.R. 1.98. The exception to this, in accordance with the 05 August 2003 Official Gazette Notice in which the USPTO waives the requirement for submitting copies of U.S. Patent and Publications for cases filed after 30 June 2003, is that copies of U.S. Patent documents and copies of U.S. Patent publications are not being submitted.

References submitted with this statement were previously cited in the following U.S. patent documents which deal with the same general subject matter: 7,058,464 issued 06 June 2006; 7,116,257 issued on 03 October 2006; 7,138,935 issued on 21 November 2006; and 11/236,215 filed on 26 September 2005.

This statement should be considered under 37 C.F.R. 1.97(c) because it is being filed before the mailing date of a FINAL office action, a Notice of Allowance, or an action that otherwise closes prosecution in the subject application, whichever occurs first, AND it is accompanied by the \$180 fee set forth in 37 C.F.R. 1.17(p).

Fee Authorization. The Commissioner is hereby authorized to charge underpayment of any additional fees or credit any overpayment associated with this communication to Deposit Account No. 50-0869 (HBES 1071-2).

Respectfully submitted,

HAYNES BEFFEL & WOLFELD LLP

Date: 16 April 2007

By: /Ernest J. Beffel, Jr./
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Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i>			Complete if Known	
	Application Number	10/810,312		
	Filing Date	26 March 2004		
	First Named Inventor	Andrew Martin MALLINSON		
	Group Art Unit	2819		
	Examiner Name	Brian K. YOUNG		
	Attorney Docket Number	HBES 1071-2		
Sheet	1	of	3	

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
	A1	2004/0165661		Braun	08-26-2004	
	A2	6795004		Masuda et al.	09-21-2004	
	A3	5559467		Smedley	09-24-1996	
	A4	5974089		Tripathi et al.	10-26-1999	
	A5	6344811		Melanson	04-05-2002	
	A6	6466087		Ruha	10-15-2002	
	A7	6794930		Nurminen	09-21-2004	
	A8	6208279		Opreescu	03-27-2001	
	A9	5903871		Terui et al.	05-11-1999	
	A10	6594309		Botti et al.	07-15-2003	
	A11	6504427		Midya et al.	01-07-2003	
	A12					
	A13					
	A14					
	A15					
	A16					
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FOREIGN PATENT DOCUMENTS								
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
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¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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		Application Number	10/810,312		
		Filing Date	26 March 2004		
		First Named Inventor	Andrew Martin MALLINSON		
		Group Art Unit	2819		
		Examiner Name	Brian K. YOUNG		
		Attorney Docket Number	HBES 1071-2		
Sheet	2	of	3		

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1	JORGE VARONA, "Power Digital-to-Analog Conversion Using Sigma-Delta and Pulse Width Modulations," ECE1371 Analog Electronics II, ECE University of Toronto, pp. 1-14, 2001.	
	C2	ERIK BRESCH and WAYNE T. PADGETT, "TMS320C67-Based Design of a Digital Audio Power Amplifier Introducing Novel Feedback Strategy," Rose-Hulman Institute of Technology, Electrical and Computer Engineering Department, pp. 1-16, 1999.	
	C3	K. P. SOZANSKI, R. STRZELECKI and Z. FEDYCZAK, "Digital Control Circuit for Class-D Audio Power Amplifier," Power Electronics Specialists Conference, PESC 2001 IEEE 32nd Annual, volume 2, pp. 1245-1250, 2001.	
	C4	MORTEN JOHANSEN and KARSTEN NIELSEN, "A Review and Comparison of Digital PWM Methods for Digital Pulse Modulation Amplifier (PMA) Systems," 107th Convention of Audio Engineering Society, September 24-27, 1999, New York, New York.	
	C5	THOMAS TAUL, KARSTEN NIELSEN and MICHAEL A.E. ANDERSEN, "Comparing Nonlinear with Linear Control Methods for Error Correction in Switching Audio Amplifier Output Stages," 104th Convention of Audio Engineering Society, May 16-19 1998, Amsterdam.	
	C6	KARSTEN NIELSEN, "MECC - A Novel Control Method for High End Switching Audio Power Amplification," 105th Convention of Audio Engineering Society, September 26-29, 1998, San Francisco, California.	
	C7	CRILLES BAK RASMUSSEN, "Hybrid Digital-Analog Feedback Audio Amplifiers," 2004 Dissertation, in cooperation with Bang & Olufsen ICEpower A/A, Lyngby 2004, Eksamensprojekt, NR. IMM-Thesis-2004-68. (NOT PRIOR ART)	
	C8	M. O. J. HAWKSFORD, "Time-Quantized Frequency Modulation, Time-Domain Dither, Dispersive Codes, and Parametrically Controlled Noise Shaping in SDM," J. Audio Eng. Soc., Vol. 52, No. 6, pp. 587-617, June 2004. (NOT PRIOR ART)	
	C9	D. WEILER, P.A. NIELSEN, D. HAMMERSCHMIDT, O. MACHUL and B. J. HOSTICKA, "Single Bit Sigma-Delta Modulator with Nonlinear Quantization for μ -Law Coding," 23rd European Solid-State Circuits Conference, Southampton, United Kingdom, 16-18 September 1997.	
	C10	D. AKSELROD, S. GREENBERG, S. HAVA and V. KOIFMAN, "Noise-Shaped Dynamic Element Matching Architecture for Multibit Delta-Sigma Converters," Accepted for publication in: Proceedings of Communication Systems, Networks and Digital Signal Processing, July 2002.	
	C11	E. BACH, "Multibit Oversampling D/A converters Using Dynamic Element Matching Methods," Siemens AG, Semiconductors Group, March 3, 1999.	

Examiner Signature		Date Considered	
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